

III. Remarks

A. Status of the Application

Claims 24-46 are currently pending. Claims 1-13 and 22-31 were previously pending. Claims 1-13, 22, and 23 are canceled by the present paper without prejudice to or disclaimer of the subject matter therein. New claims 32-46 have been added. Reconsideration of this application in light of the above amendments and the following remarks is respectfully requested.

B. Claim Rejections Under 35 U.S.C. §102

Claims 1, 3-13, 22, and 23 stand rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 6,062,575 to Mickel et al. (“the Mickel patent”). Each of these claims are canceled by the present paper. Therefore, this rejection is moot and will not be addressed at this time.

C. Claim Rejections Under 35 U.S.C. §103

Claims 2 and 24-31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Mickel patent in view of U.S. Patent No. 4,060,219 to Crawford (“the Crawford patent”). Claim 2 is canceled by the present paper. Therefore, the rejection of claim 2 is moot and will not be addressed at this time. However, Applicants traverse the rejection of claims 24-31, as amended, on the grounds that these references are defective in establishing a *prima facie* case of obviousness.

As the PTO recognizes in MPEP § 2142:

... The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness...

In the present application, a *prima facie* case of obviousness has not been factually supported for at least the reasons set forth below.

In *KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007), the Court stated that “a patent composed of several elements **is not proved obvious merely by demonstrating that**

each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a **reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.** This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *Id.* at 1741 (emphasis added). Further, MPEP §2143.03 states that “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” Quoting *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970). The present claims, as herein amended, have not been fully considered by the Examiner, and as further discussed below, are deemed to be allowable over the prior art.

First, Applicants submit that the Mickel and Crawford patents are not properly combinable as suggested by the Office Action. In that regard, the Mickel patent is directed to “apparatus and methods for coupling a driving shaft [] and a mating tool shaft [] to transmit rotational forces and axial tension and compression between the shafts.” Abstract. In contrast, the Crawford patent is directed to an “inventive quick disconnect coupler device for connection between a source of compressed air and the flexible air line hose leading to an air operated tool.” Col. 2, ll. 20-23. That is, the Mickel patent is directed to coupling a tool to a drive shaft, while the Crawford patent is directed to connecting an air supply to an air operated tool. One skilled in the art would not utilize the coupling assembly of an air supply connection—where the connection is substantially fixed and not subjected to high speed rotation—in lieu of a connection for transmitting “rotational forces and axial tension and compression.” There is simply no indication that the quick disconnect air coupler of the Crawford patent is suitable for such uses. Accordingly, the Mickel and Crawford patents are not properly combinable in the manner suggested in the Office Action. For at least this reason a *prima facie* case of obviousness has not been established with respect to claims 24-31.

Further, with respect to amended independent claim 24, even if combined—for arguments sake—the Mickel and Crawford patents at least fail to disclose “a first aperture extending from the external surface to the internal surface in a direction substantially perpendicular to the longitudinal axis, the first aperture having a first length extending substantially along the longitudinal axis and a first width extending substantially transverse to the longitudinal axis, the first length being greater than the first width such that the first aperture is elongated along the longitudinal axis,” as recited. In that regard, the Office Action notes that the Mickel patent fails to disclose such a limitation and proposes to combine passageway 146 of the Crawford patent with the device of the Mickel patent. Page 11. However, amended claim 24 requires the aperture to extend in a direction “substantially perpendicular to the longitudinal axis.” In contrast, the passageway 146 of the Crawford patent “is drilled at a 37° angle with respect to the cylindrical axis of main body 120.” Col. 4, ll. 32-33. Accordingly, even when combined the Mickel and Crawford patents fail to disclose or suggest the recited limitations of claim 24.

Further still, the passageway 146 of the Crawford patent cannot be modified to be substantially perpendicular to the longitudinal axis because this would destroy one of the intended functions of the Crawford patent. In particular, the passageway 146 is angled to prevent unwanted removal of the air plug 270. As the Crawford patent explains, “sloping wall 278 is at a 45° angle to the longitudinal axis while sloping passageway 246 is at a 37° angle to the longitudinal axis. Thus, slope 278 pushing against clamping ball 144 when trying to remove the male plug causes ball 144 to roll against the upper surface of passageway 146 into an ever decreasing space in a wedging type action, resulting in a positive type clamping of mail plug 270.” Col. 11, ll. 2-9. Further still, if the passageway was drilled substantially perpendicular to the longitudinal axis, then it would no longer meet the length and width requirements of the first aperture as recited in claim 24. In that regard, the passageway 146 is “egg shaped” as viewed from the interior of the main body 120 because it is drilled at the 37° angle. If the passageway 146 was drilled at a substantially perpendicular angle, then it would no longer be “egg shaped” and, instead, would be substantially cylindrical from the drilling. Accordingly, for at least these

additional reasons, the Mickel and Crawford patents cannot be properly combined to disclose or suggest the recited limitations of independent claim 24.

Thus, for the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to independent claim 24. Claims 25-31 depend from and further limit claim 24. Accordingly, Applicants request that the §103 rejection of claims 24-31 over the Mickel and Crawford patents be withdrawn.

D. New Claims

New claims 32-46 have been added. Each of the new claims recites limitations not disclosed or suggested by the cited references. For example, new independent claim 32 recites:

A coupling system for a medical dissection tool, the coupling system configured to connect a power source to the medical dissection tool, the coupling system comprising:

a coupling shaft having a proximal portion, an opposing distal portion, and a longitudinal axis extending therebetween, wherein the distal portion comprises an external surface and an internal surface, the internal surface defining a bore for receiving a portion of the medical dissection tool,

a first aperture extending from the external surface to the internal surface along a first axis substantially perpendicular to the longitudinal axis, the first aperture having a first length extending substantially along the longitudinal axis between a proximal wall and a distal wall, the first aperture having a first width extending substantially transverse to both the longitudinal axis and the first axis between a pair of sidewalls, wherein the first length is greater than the first width such that the first aperture is elongated along the longitudinal axis and wherein the proximal wall, distal wall, and pair of sidewalls extend in a direction substantially parallel to the first axis; and

a first locking member positioned at least partially within the first aperture and translatable along the longitudinal axis with respect to the coupling shaft from an unlocked position to a locked position to secure the medical dissection tool within the internal passage, wherein the first locking member is spaced from the proximal wall of the first aperture and adjacent to the distal wall of the first aperture in the unlocked position and wherein the first locking member is adjacent to the proximal wall of the first

aperture and spaced from the distal wall of the first aperture in the locked position.

First, as discussed above, the cited references fail to disclose a first aperture having the recited limitations of claim 24, let alone the additional structural limitations of the aperture recited in claim 32. Further, it is clear from the explicit disclosure of the Mickel patent that the balls 82 and 82' are not "translatable along the longitudinal axis with respect to the coupling shaft from an unlocked position to a locked position." As described in the Mickel patent at Col. 6, line 36 through Col. 7, line 5, the balls 82 and 82' cannot translate with respect to the driving shaft 60 along axis BB. Instead, the balls 82 and 82' are "free to move radially within substantially cylindrical walls 80, 80' respectively." Col. 6, Lines 36-38. The cylindrical openings defined by walls 80 and 80' simply do not permit translation of the balls 82 and 82' with respect to the driving shaft 60 along axis BB. As shown in Figures 3A and 3B of Mickel, the openings defined by walls 80 and 80' have substantially the same width as balls 82 and 82'. Therefore, with respect to driving shaft 60 the balls 82 and 82' are limited to radial movement, *i.e.*, movement substantially transverse to axis BB. Further, the rotation—if any—of the balls 82 and 82' within the cylindrical walls 80, 80' clearly cannot be considered translation along the longitudinal axis. In that regard, the paths of the balls 82 and 82' with respect to the driving shaft 60 (as noted by P_{82} and $P_{82'}$) cannot be considered translation along the axis BB because the paths P_{82} and $P_{82'}$ are in a direction substantially transverse to the axis BB. In contrast, as shown in applicants' Figs. 3b and 4b, the retention member 104 (as noted by P_{104}) translates through the elongated opening 302 along the longitudinal axis L1 as required by claim 32.

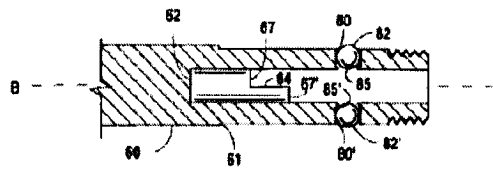


Fig. 3A

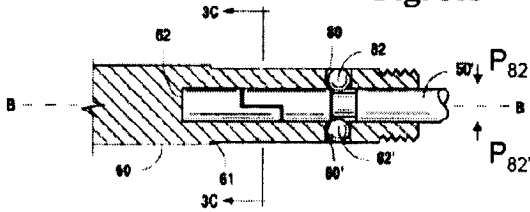
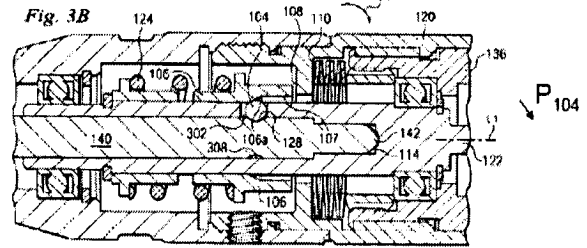
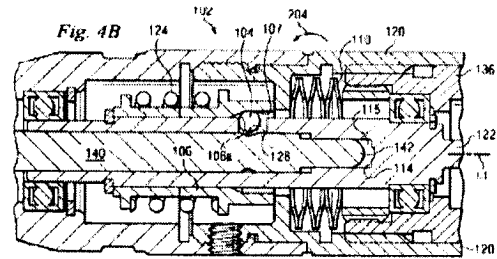


Fig. 3B



For at least the reasons set forth above, the cited references fail to disclose or suggest the recited elements of independent claim 32. Claims 33-44 depend from and further limit claim 32 and recite additional limitations not disclosed by the cited references. Accordingly, for at least these reasons Applicants submit that claims 32-44 are patentable over the cited references.

New independent claim 45 recites:

A coupling assembly for joining a power source to a medical dissection tool, the coupling assembly comprising:

a coupling shaft having a proximal portion, an opposing distal portion, and a longitudinal axis extending therebetween, wherein the distal portion comprises an external surface and an internal surface, the internal surface defining a bore extending along the longitudinal axis for receiving a portion of the medical dissection tool,

a first aperture extending from the external surface to the internal surface along a first axis substantially perpendicular to the longitudinal axis, the first aperture having a first length extending substantially along the longitudinal axis between a proximal wall and a distal wall, the first aperture having a first width extending substantially transverse to both the longitudinal axis and the first axis between a pair of sidewalls, wherein the first length is greater than the first width such that the first aperture is elongated along the longitudinal axis and wherein the proximal wall, distal wall, and pair of sidewalls extend in a direction substantially parallel to the first axis;

a first locking member positioned at least partially within the first aperture and translatable along the longitudinal axis with respect to the coupling shaft from an unlocked position to a locked position to secure the medical dissection tool within the internal passage, wherein the first locking member is spaced from the proximal wall of the first aperture and adjacent to the distal wall of the first aperture in the unlocked position and wherein the first locking member is adjacent to the proximal wall of the first aperture and spaced from the distal wall of the first aperture in the locked position;

an engagement sleeve disposed around the distal portion of the coupling shaft, the engagement sleeve having an internal contact surface for engagement with the first locking member, the internal contact surface extending at an oblique angle with respect to the longitudinal axis;

a spring biasing the engagement sleeve towards the proximal portion of the coupling shaft; and

an attachment housing disposed around the proximal portion of the coupling shaft for controlling the position of the engagement sleeve relative to the coupling shaft, the attachment housing moveable along the longitudinal axis relative to the coupling shaft by rotation of the attachment housing about the longitudinal axis;

wherein the first locking member translates at an oblique angle relative to the longitudinal axis and the first axis when moved between the unlocked and locked positions.

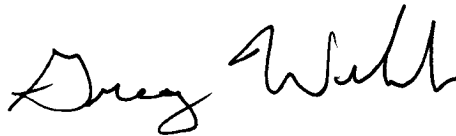
The cited references fail to disclose or suggest the recited elements of independent claim

45. Claim 46 depends from and further limits claim 45. Accordingly, Applicants submit that claims 45 and 46 are patentable over the cited references.

IV. Conclusion

It is believed that all matters set forth in the Office Action have been addressed, and that pending claims 24-46 are in condition for allowance. An indication of the allowability of the claims is respectfully requested. Should the Examiner deem that an interview with Applicant's undersigned attorney would expedite consideration of the application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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